A KEY TO THE NORTH AMERICAN GENERA OF SCOLYTIDAE

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For the past several years this writer has been engaged in a study of the comparative morphology of Scolytoid and other Rhynchophorous beetles to obtain the necessary background for preparing a natural classification of all Scolytoid genera. Although far from complete, this study has advanced sufficiently that many of the ideas can be utilized in the following preliminary classification.

Bibliographic references to the generic names employed here, their synonymy, and the names of species included in each may be obtained by consulting the Leng Catalogue and its supplements, and Wood, 1951, 1954a and b, 1956, 1957a, b and c, and 1959a and b, with two exceptions. These exceptions are *Thamnophthorus* Schedl (1938), included because one mutilated unidentifiable specimen belonging to this genus was collected in Florida and may also occur in Arizona; and *Dendrocranulus* Schedl (1937). Since its description Schedl has included a number of Central and South American species in *Dendrocranulus,* but to my knowledge has never called attention to its synonymy with *Xylocleptes* of American writers (nec. Ferrari, 1867). Schedl's genus appears to be valid and should be used to designate the New World allies of *Xylocleptes* Ferrari.

All of the genera included here in the tribe Xyleborini are grouped by Schedl into the genus *Xyleborus* Eichhoff. In the absence of any comprehensive review of the tribe and in view of the distinctness of the groups within this tribe in North America, tentative generic recognition is retained for each.

A character not previously described in the subfamily Ipinae suggests a sharp break between the Pityophthorini-Corthylini and other Ipinae. In virtually all other Scolytidae a tubercle at the anterior end of the metepisternum fits into a corresponding groove on or near the inner costal margin at the humeral angle of the elytra. In Pityophthorini and Corthylini this tubercle is absent and is replaced by two subtransverse grooves on the metepisternum; the elytral groove is reduced and modified to match those of the metepisternum. As a result of this shift in position of the mechanism that locks the elytra in the closed position the elytra extend ventrad to a greater degree than in other Scolytidae completely covering at least the posterior two-thirds of the metepisternum. While concealment of the metepisternum is merely a reflection of the more fundamental but obscure morphological change, it is easily observed and serves as a useful key character.

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[2] A key to the Nearctic subfamilies, tribes and genera of Scolytidae is presented below in order that it will be available for use in "The Beetles of the United States," fascicle 110, by R. H. Arnett, Jr.

KEY TO THE GENERA OF SCOLYTIDAE OF THE UNITED STATES

1. Lateral margin of anterior and posterior tibiae unarmed except for a single curved process at outer apical angle that curves toward and extends beyond process of inner apical angle; lateral line of pronotum sharply elevated; antennal club flattened, the sutures strongly procurved, funicle seven-segmented (subfamily SCOLYTINAE, tribe Scolytini) ---------- 2

Lateral margin of anterior tibia armed by several toothlike processes none of which curve toward the inner process; lateral line of pronotum raised or not, antennal club and funicle variable ---------- 3

2(1). Elytral declivity rather steep, descending to meet the horizontal abdomen; scutellum small, flush with surface of elytra; antennal scape at least as long as funicle --**LOGANIUS**

Elytra slightly if at all declivous behind, the abdomen ascending abruptly behind to meet them; antennal scape distinctly shorter than funicle ----------**SCOLYTUS**

3(1). Anterior margins of elytra raised and bearing a series of crenulations; scutellum, if visible, rounded, somewhat depressed and displaced posteriorly causing a slight emargination between bases of elytra; pronotum usually unarmed; head usually visible from above (subfamily HYLESININAE) ---------- 4

Anterior margins of elytra unarmed, usually smooth and either rounded or with a fine raised line; scutellum flush with elytral surface, its anterior margin and elytral bases forming an almost straight transverse line across body; pronotum usually armed by granules or asperites on at least anterior third; head usually concealed from above (subfamily IPINAE) ---------- 25

4(3). Prothoracic tibia with a curved bifid process, and meso- and metathoracic tibiae with a single curved spine extending beyond spine of inner apical angle; prothorax usually longitudinally strigose; antennal funicle seven-segmented; lateral prosternal area bearing a sharply elevated ridge from coxae to anterior margin; crenulations on elytral bases rather small (tribe Bothrosternini) ---------- 5

Tibiae bearing several teeth, none extending beyond tarsal insertion; prothorax never longitudinally strigose; antennal funicle and prosternal area variable ---------- 6

5(4). Sutures of antennal club straight; rostrum distinctly wider than distance between eyes; body elongate ----------**CNESINUS**

Sutures of antennal club procurved; rostrum width at tip equal to distance between eyes; body oval; frons excavated, with median tubercle just above epistoma --**PAGIOCERUS**

6(4). Lateral prosternal area sharply elevated from coxae to anterior margin; crenulations on elytral bases usually poorly developed; funicle seven-segmented, club conical; head somewhat prolonged, subrostrate; eye entire (tribe Hylastini) ---------- 7

Prosternal area without elevated ridge; head not prolonged, the frontal area usually sexually dimorphic; funicle four- to seven-segmented; antennal club more or less flattened; eye variable ---------- 10

7(6). Crenulations at elytral bases rather well developed, forming a single row of teeth; first and second segments of antennal club subequal in length; body rather stout, length less than 2.5 mm.; in roots of herbaceous legumes ----------**HYLASTINUS**

Crenulations at elytral bases poorly developed, irregularly placed, not forming a definite single row; first segment of antennal club distinctly longer than second; usually larger than 3 mm., very slender if smaller ---------- 8

8(7). Anterior coxae widely separated; general surface of elytra and between punctures on pronotum dull; vestiture sparse, recumbent, yellow; body color reddish brown ---------- **SCIERUS**

Anterior coxae narrowly separated, almost contiguous; general surface between punctures on pronotum and elytra smooth and shining; the longer hairlike vestiture erect; mature color usually dark brown or black ---------- 9

9(8). Third tarsal segment broad, bilobed; pronotum usually constricted anteriorly, about equal numbers of small and large punctures intermixed on disc----------**HYLURGOPS**

Third tarsal segment narrower, emarginate; pronotum not noticeable constricted anteriorly, punctures uniformly large, intermixed with very few small ones ---- **HYLASTES**

10(6). Scutellum visible, elytral bases notched for its reception; third tarsal segments stout, usually somewhat bilobed (except slender in CHRAMESUS) if slender fore coxae separated ---------- 11

Scutellum absent, elytra bases only slightly or not at all emarginate at suture; third tarsal segments slender; fore coxae contiguous ---------- 21

11(10). Eye oval, entire; antennal club less strongly compressed, subconical (except DENDROCTONUS); anterior coxae contiguous (except XYLECHINUS); male frons not impressed (tribe Hylurgini) -- 12

Eye more elongate, frequently sinuate or emarginate; club more strongly compressed, usually asymmetrical in outline; anterior coxae separated by an intercoxal piece (tribe Hylesenini) -- 15

12(11). Antennal club rather strongly flattened; vestiture hairlike; submarginal epistomal process well developed; antennal funicle five-segmented; mesosternum flat, sloping -- DENDROCTONUS

Antennal club almost conical, only slightly compressed; vestiture of abundant, short scalelike or stout bristlelike setae and interstrial rows of longer setae; epistomal process obsolete; antennal funicle five- or seven-segmented ------------------ 13

13(12). Mesosternum slightly convex, sloping; vestiture of abundant short bristles and rows of longer hair -- HYLURGOPINUS

Mesosternum protuberant, anteriorly declivous; short ground vestiture scalelike - 14

14(13). Antennal funicle five-segmented; median rows of longer, erect setae scalelike -- XYLECHINUS

Antennal funicle seven-segmented; median rows of longer, erect setae hairlike -- PSEUDOHYLESINUS

15(11). Antennal funicle six- or seven-segmented, club less strongly compressed, the sutures transverse; tibiae more slender, abruptly narrowed apically, the teeth confined to apical one-fourth (except LEPERISINUS) ------------------------------ . 16

Antennal funicle five-segmented, club more strongly compressed, the sutures oblique or obsolete; tibiae more strongly dilated, rather gradually narrowed on apical third, the teeth distributed over apical half -- 19

16(15). Antennal funicle six-segmented; anterolateral areas of pronotum unarmed and eye shallowly emarginate -- --- - . ---------------------- CARPHOBIUS

Antennal funicle seven-segmented; anterolateral areas of pronotum armed by a few asperities or else eye not emarginate -- 17

17(16). Pronotum unarmed in anterolateral areas; scutellar notch between elytra very deep, acute; elytra extended anteriorly over pronotum, the margins in humeral area angulate, pronotum abruptly grooved to accommodate elytral margins; all coxae very widely separated; costal margins of elytra rather strongly ascending posteriorly, the abdomen ascending to meet them; xylophagous species ------ DENDROSINUS

Pronotum armed by a few asperities in anterolateral areas; scutellar notch obtuse; anterior margins of elytra rather evenly rounded, not strongly extended over pronotum; coxae moderately separated; bark inhabiting species ------------------- 18

18(17). Eye entire; costal margins of elytra ascending slightly at apex, abdomen ascending to meet them; vestiture scalelike; hosts FRAXINUS species ------------- LEPERISINUS

Eye shallowly emarginate; costal margins of elytra descending to apex, abdomen horizontal; vestiture hairlike; hosts ALNUS species ------------------- ALNIPHAGUS

19(15). Eye deeply emarginate; antennal club with three oblique sutures; pronotum unarmed; hosts Cupressinine trees, rarely other conifers ---------------------- PHLOEOSINUS

Eye entire; antennal club either deeply divided on one side into three parts, or club solid and unmarked by sutures; prothorax usually armed by a few asperities in anterolateral areas -- 20

20(19). Antennal club deeply divided into three units that may be movable on one another; vestiture hairlike -- ----- ------------------------------ PHLOEOTRIBUS

Antennal club solid, unmarked by sutures, the funicle apparently attached to its side; vestiture mostly scalelike ------------------------------------ CHRAMESUS

21(10). Eye sinuate or entire; crenulations on elytral bases restricted to area between fifth interspaces; funicle four- or five-segmented; monogamous species (tribe Hypoborini) 22

Eye deeply emarginate or entirely divided; crenulations on elytra bases more generally distributed, extending lateral to fifth interspace; funicle five- or six-segmented; polygamous species (tribe Polygraphini) --------------------------------- 24

22(21). Antennal funicle four-segmented, sutures of club indicated only by marginal notches; elytra with uniseriate rows of erect, broad interstrial scales and recumbent strial hair of equal length; pronotum armed by three or four pairs of median tubercles, the anterior pair usually marginal --------- LIPARTHRUM

Antennal funicle five-segmented, sutures of club transverse, distinct; elytral vestiture without conspicuous recumbent hair; pronotum armed by two or three widely separated paired clusters of lateral teeth ------------------------------------- 23

23(22). Antennal club broad, only slightly longer than wide, with two sutures; setae on anterior margin of pronotum not specially modified; elytral vestiture of fine, tapering subplumose hair ---------- **CHAETOPHLOEUS**

Antennal club usually much longer than wide, with three sutures; anterior margins of pronotum bearing a fringe of specialized setae; elytral vestiture of stout bristle- or scalelike setae ---------- **RENOCIS**

24(21). Antennal club marked by sutures; eye emarginate; antennal funicle always five-segmented ---------- **CARPHOBORUS**

Antennal club solid, unmarked by sutures; antennal funicle five- or six-segmented, variable; eye completely divided into two parts ---------- **POLYGRAPHUS**

25(3). Metepisternum visible to posterior extremity; antennal club usually thickened basally, obliquely truncate or sutures, if visible, strongly displaced apically on posterior surface; antennal funicle one- to six-segmented ---------- 26

Metepisternum largely covered by elytra, visible only in front; antennal club strongly flattened with sutures on both sides, those on posterior surface not strongly displaced apically; tibiae slender, usually bearing about three teeth on apical portion; antennal funicle with from one to five segments ---------- 65

26(25). Antennal funicle six-segmented (five-segmented in CACTOPINUS); anterior coxae moderately separated by an intercoxal piece ---------- 27

Antennal funicle two- to five-segmented; anterior coxae contiguous (except XYLOSANDRUS of the Xyleborini) ---------- 36

27(26). Outer apical angle of fore tibia armed by a process extending beyond tarsal insertion; lateral margin of pronotum marked by a sharp, finely raised line (tribe Hexacolini) 28

Fore tibia with sides parallel, usually armed only on apical margin by small teeth, never with process on outer apical angle exceeding tarsal insertion; lateral margins of pronotum rounded (tribe Micracini) ---------- 29

28(27). Anterior area of pronotum transversely rugose; pronotum and elytra subglabrous ---------- **HEXACOLUS**

Pronotum uniformly punctured, unarmed; vestiture of pronotum and elytra abundant, consisting of erect, stout, almost scalelike bristles ---------- **PYCNARTHRUM**

29(27). Antennal club small, greatest width through basal half, apex narrowly rounded, the sutures straight, transverse ---------- 30

Antennal club usually larger, the greatest width through apical half, apex broadly rounded, the sutures procurved ---------- 32

30(29). Prothorax asperate to base in median area, summit on basal third, usually extending behind its basal margin and over scutellum; male frons bearing a very large, long, partly double process which may curve upward and backward over prothorax, sometimes reaching its posterior margin; body usually covered by an incrustation -- **CACTOPINUS**

Summit at or slightly behind middle of prothorax, basal third devoid of asperities; male frons not armed by a large median process ---------- 31

31(30). Elytral declivity subvertical, bisulcate, obtusely angulate behind; sutures of antennal club distinctly marked by rows of setae; antennal pedicle and scape about equal in length ---------- **STENOCLEPTUS**

Elytral declivity more gradual, evenly convex, rather narrowly rounded behind; sutures of antennal club indicated only by marginal notches; scape distinctly longer than pedicle ---------- **CRYPTOCLEPTES**

32(29). Elytra broadly rounded behind; margins of antennal club usually constricted at first suture ---------- 33

Elytra acuminate behind; antennal club without sutural constrictions at sides ---------- 34

33(32). Pronotum wider than long, widest near base; summit more prominent; fore tibia more slender, apically obliquely truncate, mucro often bifurcate ---------- **PSEUDOTHYSANOES**

Pronotum longer than wide, widest near middle; summit less prominent; fore tibia rather broad, more nearly truncate apically, mucro undivided ---------- **THYSANOES**

34(32). Sutures of antennal club broadly procurved, the first appearing bisinuate and extending less than one-third length of club; scape club-shaped, with few setae; eye oval, rather small; fore tibia more slender, slightly wider apically, with supplemental tubercles on posterior face ---------- **HYLOCURUS**

Sutures of club very strongly, narrowly procurved, the first usually reaching middle of club; scape compressed, subtriangular, with numerous long setae; eye large, elongate; fore tibia broad, sides subparallel, posterior surface devoid of tubercles except for teeth on apical margin ---------- 35

35(34). Eyes moderately separated beneath, entire; fore tibia with all five teeth on distal margin, mucro broad ---------- MICRACIS

Eyes subcontiguous beneath, emarginate; fore tibia with at least one of the five teeth on outer margin, mucro more slender ---------- MICRACISELLA

36(26). Antennal club more strongly flattened, with sutures on both faces, those on posterior face strongly procurved and limited to apical half; costal margins of elytra slightly ascending posteriorly; antennal funicle three- to five-segmented (tribe Cryphalini) 37

Antennal club obliquely truncate or at least with sutures of posterior face restricted to less than apical one-fourth; costal margins of elytra descending posteriorly ---- 46

37(36). Pronotum without a fine, raised lateral line (an indistinct line in CRYPHALOMORPHUS); eye sometimes sinuate, never emarginate; costal margin of elytra ascending only slightly posteriorly ---------- 38

Pronotum acutely margined at sides, and with a fine, raised line at least on basal one-third; eye emarginate (except TRISCHIDIAS); costal margins of elytra distinctly ascending posteriorly ---------- 41

38(37). Antennal funicle five-segmented; antennal club narrow, pointed at tip, sutures straight, not septate; basal half of pronotum without scalelike setae ---------- CRYPHALUS

Antennal funicle four-segmented; antennal club broadly rounded at tip, the sutures curved, partly septate or both; basal half of pronotum with scalelike setae ------- 39

39(38). Antennal club not septate, sutures indicated by three strongly procurved rows of setae ---------- ERNOPOCERUS

Antennal club with at least part of first suture septate, none of sutures indicated by strongly procurved rows of setae ---------- 40

40(39). Sutures of antennal club straight, the first septate; anterior margin of pronotum slightly produced; pronotum with no indication of a fine raised lateral line ------ PROCRYPHALUS

Antennal club with a strongly oblique septum on one side, no other sutures indicated; anterior margin of pronotum broadly rounded; pronotum with an indistinct, fine, raised lateral line ---------- CRYPHALOMORPHUS

41(37). Antennal club not septate, with sutures indicated by rather strongly recurved rows of setae; third tarsal segment broad and emarginate ---------- TAENIOGLYPTES

Sutures of antennal club straight or procurved; third tarsal segment cylindrical ---- 42

42(41). Antennal funicle five-segmented (male usually four-segmented); eye distinctly emarginate; body size greater than 1.4 mm. (except some STEPHANODERES) --------- 43

Antennal funicle three- or four-segmented; eye sinuate to indistinctly emarginate; body size less than 1.4 mm. ---------- 45

43(42). Strial punctures obsolete; posterior half of pronotum finely granulate; antennal club large, not septate; male and female similar in size and appearance ----- HYPOCRYPHALUS

Strial punctures distinct; posterior half of pronotum not closely granulate, usually punctate; male much smaller than female ---------- 44

44(43). Antennal club not septate; raised lateral margin of pronotum extending two-thirds of distance from basal margin; elytra glabrous except for a few subcapitate interstrial bristles ---------- CRYPTOCARENUS

First sutures of antennal club partly septate; raised lateral margin extending only one-third of distance from basal to anterior lateral margin; elytra clothed by rows of strial and interstrial setae ---------- STEPHANODERES

45(42). First suture of antennal club partly septate; body slender, more than 2.4 times as long as wide; striae and strial punctures not as strongly impressed; usually larger than 1.1 mm. ---------- HYPOTHENEMUS

Antennal club not septate; body stout, less than 2.3 times as long as wide; striae and strial punctures more strongly impressed; smaller than 1.1 mm. ---------- TRISCHIDIAS

46(36). Antennal funicle two- or three-segmented; pronotum unarmed, punctured over entire surface, lateral line not sharply raised; minute size, 2 mm. or less (tribe Crypturgini) 47

Antennal funicle four- or five-segmented; pronotum usually armed anteriorly by granules or asperities, if unarmed lateral line sharply raised; usually larger, mostly over 2 mm. ---------- 48

47(46). Antennal funicle two-segmented, club with one obscure suture indicated at tip CRYPTURGUS

Antennal funicle three-segmented; club with three sutures indicated --------- DOLURGUS

48(46). Eye completely divided by an emargination; antennal funicle four-segmented, club without distinct sutures (tribe Xyloterini) ---------- 49

Anterior margin of eye sinuate or emarginate, never completely divided; antennal funicle five-segmented (four-segmented in LYMANTOR), club usually with evident sutures 50

49(48). Antennal club with subcorneous basal area strongly, rather narrowly procurved; anterior tibia of female thickened and tuberculate on posterior face, flattened and finely tuberculate in male; male head deeply, broadly excavated, the prothorax subquadrate; female frons convex, anterior margin of female pronotum rounded -- **TRYPODENDRON**

Antennal club with subcorneous basal area broadly procurved; anterior tibia flattened and devoid of tubercles on posterior face; frons not excavated in either sex; anterior margin of prothorax rounded in both sexes ---------- **XYLOTERINUS**

50(48). Pronotum either punctured or else finely granulate over almost entire surface, dorsal profile evenly convex, not strongly declivous anteriorly, anterior margin never armed; tibia usually rather slender and armed by few, coarse teeth; declivity unarmed (tribe Dryocoetini) ---------- 51

Pronotum more coarsely asperate and more strongly declivous anteriorly, usually punctate at least on posterior third, anterior margin sometimes armed; tibia variable; declivity frequently armed by spinous processes ---------- 55

51(50). Prothorax distinctly longer than wide, widest at middle; antennal club compressed or with membranous apical portion extended beyond corneous portion, sutures procurved; scutellum very small ---------- 52

Prothorax about as wide as long, widest on posterior third, rather strongly narrowed on anterior half; antennal club subtruncate, sutures transverse or recurved; scutellum moderate to large ---------- 53

52(51). Antennal funicle four-segmented; club compressed, sutures strongly arcuate; pronotum granulate on anterior half, punctured behind; host ACER ---------- **LYMANTOR**

Antennal funicle five-segmented; club less strongly compressed, sutures rather broadly procurved; pronotum granulate to base; host CUCURBITA ---------- **DENDROCRANULUS**

53(51). Basal corneous portion of antennal club reaching beyond middle; declivity short, steep, confined to posterior one-fourth of elytra ---------- **DRYOCOETES**

Corneous portion of club not reaching middle in central area; declivity gradual, extending over at least posterior one-third ---------- 54

54(53). Pronotal asperities very fine, widely separated; pronotum moderately to weakly convex both transversely and longitudinally ---------- **POECILIPS**

Pronotal asperities larger, very close, their bases almost touching; pronotum very strongly convex both transversely and longitudinally. ---------- **COCCOTRYPES**

55(50). Meso- and metathoracic tibiae rather slender, abruptly narrowed apically, armed by a few rather widely spaced coarse teeth; males and females similar in size and general shape (tribe Ipini) ---------- 56

Meso- and metathoracic tibiae rather broadly dilated to a point slightly beyond middle then gradually narrowed to apex, and armed by a series of small closely set teeth of more or less uniform size and shape; males rare, usually smaller and radically different in shape (tribe Xyleborini) ---------- 60

56(55). Elytral declivity, rather narrowly bisulcate, margins moderately elevated, rounded and armed by not more than three teeth; lower margin of declivity rounded; usually smaller than 3 mm. ---------- 57

Elytral declivity broadly, rather deeply excavated, margins acutely elevated and armed by more than three tubercles or teeth; lower margin of declivity provided with an acutely elevated transverse ridge separating declivital excavation from apical margin; usually larger than 3 mm. ---------- 59

57(56). Prosternal intercoxal piece short, obtuse; female frons deeply, rather narrowly excavated; male declivity with two or three pair of enlarged teeth; antennal club compressed, two sutures visible on distal third of posterior face ---------- **PITYOGENES**

Prosternal intercoxal piece long and acutely tapered; female frons convex; male declivity more narrowly impressed ---------- 58

58(57). Antennal club compressed, with two sutures visible on distal fourth of posterior face; elytral declivity less strongly impressed, the lateral teeth minute; vestiture on anterior parts of prothorax and frons not more abundant or longer ---------- **ORTHOTOMIDES**

Antennal club obliquely truncate, without sutures on posterior face; elytral declivity more strongly impressed, the lateral teeth larger particularly in male; vestiture much longer and more abundant on anterior portion of prothorax and frons, particularly in female ---------- **PITYOKTEINES**

59(56). Antennal club obliquely truncate, the sutures recurved; elytral declivity less strongly excavated, the third tooth displaced mesally, not on summit of declivited margin ---------- **ORTHOTOMICUS**

Antennal club flattened, the sutures procurved bisinuate or transverse; elytral declivity broadly excavated, all teeth on summit of lateral margin ---- IPS

60(55). Anterior coxae widely separated; body stout, elytra less than 1.3 times as long as pronotum ---- XYLOSANDRUS

Anterior coxae contiguous; body elongate, often slender, elytra at least 1.5 times as long as pronotum ---- 61

61(60). Antennal club more strongly compressed, corneous area small, near base, its distal margin procurved, distal pubescent portion reaching basal one-fifth at sides; elytra obliquely truncate behind, declivity broadly, concavely excavated and acutely margined on a complete circle at periphery ---- PREMNOBIUS

Antennal club thickened basally, corneous area larger with its distal margin recurved, pubescent area not reaching basal third; elytral declivity convex, not acutely margined on upper half ---- 62

62(61). Pronotum wider than long, rather coarsely asperate in front; body stout ---- 63

Pronotum longer than wide, rather finely asperate in front; body slender ---- 64

63(62). Pronotum subquadrate, asperate to base, anterior margin unarmed; declivity bearing several granules or rather large teeth, some on second interspace ---- AMBROSIODMUS

Pronotum subcircular, minutely reticulate-granulate and punctured on basal half, anterior margin armed by a series of median teeth; declivital granules small ANISANDRUS

64(62). Scutellum conical; lower margin of declivity, beginning about interspace seven, bearing a series of pointed tubercles, the one nearest suture (at end of interspace two) largest ---- XYLEBORINUS

Scutellum flat; lower margin of declivity acute or rounded, unarmed ---- XYLEBORUS

65(25). Posterior oral region including pregula flush with surrounding surface of head, pregula broad, its lateral sutures apparently diverging to run behind oral ridge; pubescence more abundant; antennal club usually smaller, funicle five-segmented, except three- or four-segmented in DENDROTERUS; bark or twig beetles (tribe Pityophthorini) 66

Posterior oral region including pregula depressed below surrounding surface of head or pregula narrow, greatly reduced in size, its sutures extending anteriorly into oral cavity; pubescence less abundant; antennal club usually larger, the funicle one- to five-segmented; ambrosia beetles (tribe Corthylini) ---- 73

66(65). Basal and lateral margins of prothorax rounded, without a fine raised line; antennal club somewhat larger in size; vestiture shorter and more uniform in length ---- 67

Basal and posterior portion of lateral margins with a fine raised line; antennal club proportionately smaller; vestiture usually longer on declivity than on disc ---- 68

67(66). Antennal funicle three-segmented (sometimes four segments in Mexican species); club less than twice as long as funicle; female pronotum without patches of pilose pubescence; elytral pubescence abundant ---- DENDROTERUS

Antennal funicle five-segmented, club at least twice as long as funicle; female prothorax with a pair of pilose pubescent areas on middle third of lateral areas; elytral pubescence sparse ---- PITYOBORUS

68(66). Antennal club devoid of sutures except for one strongly oblique septum on anterior half of club only; prothorax evenly rounded in dorsal profile, summit inconspicuous, asperities fine, transition from asperate to punctured area gradual ---- THAMNOPHTHORUS

Antennal club with at least two complete sutures indicated at least by setae; prothorax usually more strongly declivous anteriorly, summit and arrangement of asperities variable ---- 69

69(68). Sutures of antennal club not septate; pronotal asperities usually extending behind middle at sides, the transition from asperate to punctured area gradual; body moderately to very stout ---- 70

First and second sutures of antennal club septate; pronotal asperities usually not reaching middle, the transition from asperate to punctured area usually abrupt, summit usually well developed; body moderately stout to slender ---- 71

70(69). Usually smaller, 2.0-2.9 mm.; anterior margin of pronotum rather coarsely serrate; pronotum with transverse impression behind summit; ninth interspace weakly elevated; antennal club distinctly longer than funicle; twig beetles, never in cones ---- MYELOBORUS

Usually larger, 2.6-4.0 mm.; anterior margin of pronotum feebly or not at all serrate; pronotum without transverse impression behind summit; ninth interspace not elevated; club and funicle equal in length; in cones, rarely in twigs, of PINUS -- CONOPHTHORUS

71(69). Pronotum and elytra minutely densely punctured; vestiture very short, usually dense; antennal club with first segment shorter than others; greater development of frontal vestiture a male character; hosts QUERCUS, rarely other broadleaf trees -- **PSEUDOPITYOPHTHORUS**

Pronotum and elytra more coarsely, less densely punctured; vestiture usually longer and less abundant; greater development of frontal vestiture a female character---- 72

72(71). Pregular area greatly enlarged and ornamented by a beardlike growth of long hair -- **PITYOPHILUS**

Pregular area normal and without conspicuous vestiture--------------- **PITYOPHTHORUS**

73(65). Antennal funicle five-segmented, club smaller, less than twice as long as funicle------ 74

Antennal funicle one- or two-segmented; club very large, more than three times as long as funicle -- 75

74(73). Costal margins of elytra near declivital suture normal, not elevated; pronotal punctures rather coarse, abundant; elytral punctures confused, vestiture rather abundant -- **CONOPHTHOCRANULUS**

Costal margins of elytra near declivital suture strongly elevated, forming a horizontal flange; pronotal punctures minute, rather sparse; elytral punctures in rows, vestiture sparse --- **GNATHOTRICHUS**

75(73). Antennal funicle two-segmented; posterior surface of fore tibia tuberculate; elytra emarginate or divaricate at sutural apex -------------------------- **MONARTHRUM**

Antennal funicle one-segmented; posterior surface of fore tibia smooth; elytra evenly rounded behind, without a sutural notch at apex----------------------- **CORTHYLUS**

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